

mortality. Pulmonary decortication will be materially facilitated in some cases, owing to the softening action of the solution on the visceral pleura. A pulmonary decortication through a rib-spreading exposure after preliminary hypochlorite solution irrigation is the most conservative treatment for cavities that are not obliterated by drainage or Dakin's solution treatment alone. If such an operation is successful, the lung is restored to its normal structural and functional relationship, thereby obliterating the cavity. If the operation is only partly successful, the magnitude of a secondary destructive operation is proportionately decreased. Since it is impossible to judge with certainty before operation of the relative expansibility of the lung in every recent non-tuberculous case, a decortication should be done rather than a destructive operation, thereby giving the patient the benefit of the doubt. If the lung does not expand, or if a considerable cavity persists following decortication, a plastic operation is indicated. If the cavity is of considerable extent or the patient debilitated, a two- or three-stage plastic operation is to be recommended. The recognition of tuberculous empyema is often difficult. A history of a primary pleurisy with effusion seems more often to signify a tuberculous condition than does a pulmonary lesion, unless the latter is active and extensive. A tuberculous empyema may be present in the absence of clinical or x-ray evidence of pulmonary involvement. The typical microscopic picture in the sectioned pleura or the demonstration of the bacilli in the exudate may constitute the only evidence in such cases. A tuberculous empyema not secondarily infected should not be drained, and should be aspirated only for a considerable accumulation of fluid. For a tuberculous empyema secondarily infected, either by operation or spontaneously, drainage is necessary. In the absence of bronchial fistulas and of bleeding, secondarily infected tuberculous empyema may be markedly benefited by antiseptic solution treatment. The amount of fibrosis or other pathologic change in the lung in such cases determines the degree of expansion of the lung, whether following antiseptic solution treatment or decortication. If the lung fails to expand in whole or in large part, a several-stage operation designed to collapse the chest wall is indicated. Tuberculous patients are relatively poor operative risks. Adequate drainage is the first indication in cases of empyema cavities which are draining through large bronchial fistulas. The fistulas may be obliterated spontaneously following such treatment. Operative closure of bronchial fistulas that persist is necessary to complete healing. It may be accomplished by decortication of the involved portion of the lung with cautery, suture, or skin plastic to cover the opening of the fistula. Occasionally healing results from simple granulation of surrounding tissue after destruction of the epithelial lining of the bronchial stoma. Closing the bronchus that is draining pus from within the lung may result in a secondary lung abscess. A large bronchial fistula is a contra-indication to Dakin's solution treatment. Sinuses of variable duration are common following more or less complete obliteration of empyema cavities; a large proportion eventually are obliterated without radical treatment; for those which persist, plastic operation is indicated. Operative mortality in chronic empyema has been due largely to shock and infection. Reduction of the extent of operation and preliminary sterilization will materially lower this mortality.

PEDIATRICS

UNDER THE CHARGE OF

THOMPSON S. WESTCOTT, M.D., AND ALVIN E. SIEGEL, M.D.,
OF PHILADELPHIA.

An Unusual Case of Cretinism.—KENLEY (*Arch. Ped.*, August, 1919) reports a case of a girl, aged eight and a half years, who weighed forty and a half pounds. She was thirty-seven and a half inches tall. She was a full term baby and weighed four and a half pounds at birth. She was breast fed for seven months and then bottle fed. Her growth was slow and she appeared backward in her development. Dentition began fifteen months, and she did not walk until her third year. Her appetite was always poor and there was habitual constipation. She was dull and inactive and took but little interest in her surroundings. On physical examination the heart, lungs, kidneys and blood were found to be negative. The abdomen was large and protuberant, and there was an umbilical hernia. The hair was dry and coarse and the nose flat and the lips thick, the skin dry and harsh and cool to the touch, the teeth poorly formed and decayed. The second set had not appeared. She could say only a very few words, had no interest in play nor in other children. She showed all of the classical signs of cretinism and was given a suitable diet and placed on one grain of thyroid extract twice a day. This was later reduced to a half grain. In a year and thirteen days she gained eight and three-quarter pounds in weight and grew six and five-eighth inches. Her mental improvement was remarkable and kept pace with the change for the better in physical appearance. The change in the character of the hair was most noticeable and the large umbilical hernia disappeared.

Some Remarks on Cranial Sinus Thrombosis in Children.—OPPENHEIMER (*Arch. Ped.*, January, 1920) reminds us there are two recognized forms of thrombosis—primary or marasmic; and secondary or infective or inflammatory. The latter is the more frequent type. The primary type usually is located in the longitudinal sinus, rarely in the lateral and still less frequently in the cavernous. It occurs during the first two years of life and more especially during the first six months. The diagnosis of primary sinus thrombosis in children is difficult and is seldom made during life. Secondary or infective sinus thrombosis is much more frequent than the primary form, and follows extension of inflammation of parts contiguous to the sinus wall. It occurs almost as frequently in children as in adults. It generally affects one of the dual sinuses. In its later stages it is often associated with meningitis, and not rarely with small cerebral or cerebellar abscesses. The most frequent causes are the suppurative middle ear lesions. Males are affected more frequently than females, and the right lateral sinus is more frequently involved than the left. This is probably because the right is usually larger and closer to the mastoid cavity than the left. The symptoms are fairly constant, although in children they may be

masked by the presence of some underlying acute infectious condition. The temperature may be high. Chills are absent as a rule. The hands and feet may be often found to be cold. An important point is the taking of a two-hour temperature in order to note accurately the varying oscillations. Typical cases occasionally present themselves where the temperature remains steadily high without much remission. In older children there may be headache, pains in the occipital region, and tenderness on palpation along the jugular vein. A diagnostic sign of importance is the unilateral enlargement of the lymph nodes at the junction of the facial vein with the internal jugular. The cord-like feel along the border of the sternocleidomastoid is quite typical. There is often nasal hemorrhage. Drowsiness is frequent. Dysphagia is an important symptom. The treatment is entirely surgical.

Fluid Injections in Dehydrated Infants.—MCLEAN and LANG (*Am. Jour. Dis. Children*, May, 1920) treated 76 infants showing signs of dehydration by giving fluid injections. These 76 children received 269 injections of fluid. Of these 155 were hypodermoclyses, 92 were intraperitoneal injections and 22 were sinus injections. The mortality was 56.5 per cent. The amount of clyses varied between 90 and 150 c.c., depending on the size and the condition of the child. In a few cases $\frac{1}{100}$ to $\frac{1}{50}$ grain of atropin was used in the solution. On one occasion 120 c.c. of a 6 per cent. dextrose solution was used. The intraperitoneal injection fluids were of various formulae, varying in amount from 150 to 240 c.c. Their records show worse results in infants receiving more than three injections than in those receiving less than three injections. In spite of this it was found that repeated injections usually do no harm. There was no relation between the weight of the infant and the mortality rate. The mortality was considerably higher in infants who showed a weight loss twenty-four hours after injection than in those who maintained their weight or gained. There was no marked difference in the death-rate of different age groups. A change of ten in the pulse-rate, of five in the respiration and of 1° of temperature are definite signs of reaction. The pulse was more frequently affected after sinus and intraperitoneal injections than after hypodermoclyses. The respiratory rate was more frequently affected in peritoneal injections than after sinus injections or hypodermoclyses. The temperature was more frequently affected after sinus injections. Weight gains were more frequently noted after intraperitoneal injections. It was also noted that the shorter the interval between the onset of symptoms and the beginning of treatment, the greater was the response.

The Value of Luetin in an Out-patient Department.—MEYENS (*Arch. Ped.*, April, 1920) tested 168 cases, of which 61 per cent. were males and 39 per cent. were females. The ages varied from eighteen years to seven weeks. The total number of positive reactions was 65.4 per cent. In practically every case that gave a positive reaction with the luetin test there was something in the history or physical findings indicative of syphilis. The family history suggested lies in 35 per cent. of the cases, while 30 per cent. was diagnosed from the clinical findings. The various reactions to luetin may be grouped under five distinct heads: papular, vesiculopustular, delayed or torpid, urticarial and hemorrhagic. The majority

were papular. After forty-eight hours there appeared at the site of injection a definitely indurated papule, 5 to 12 mm. in diameter, usually surrounded by a zone of redness of varying size. Over one-third were of the pustular type. In this type an indurated papule appeared in two or three days. It soon became vesicular, and after central softening this became a pustule, which ruptured and formed a scab. Several cases gave the delayed or torpid reaction. The primary papule soon disappeared and simulated a negative reaction. In ten to twelve days it reappeared and progressed to either a definitely indurated papule or a pustule, after which it followed the progress of the particular type. There were 3 cases of urticarial type. In about nine days after injection the lesion took on a distinct urticarial form about 8 mm. in diameter. In a few days it changed to a papule. There were only 2 cases of the hemorrhagic type. Instead of the lesion filling with pus it contained a hemorrhagic exudate. The test is a simple matter if the injection is made intracutaneously, and 65 per cent. of congenital hæmætes will react positively to the test. There are no constitutional reactions.

The Diagnosis and Treatment of Congenital Pyloric Stenosis.—HARDT (*Penna. State Med. Jour.*, May, 1920) says that this condition undoubtedly exists much more frequently than is diagnosed. The first symptom is vomiting, which frequently begins as regurgitation and gradually becomes worse until it becomes distinctly projectile in character. It occurs after each feeding or after several retained feedings. The character of the vomitus is not distinctive. The vomiting is the most alarming symptom. There is a peristaltic wave which appears after food is taken and radiates from the cardia to the pylorus. A tumor may be felt to the right and above the level of the umbilicus. There are scanty stools and urine and progressive loss of weight. Fluoroscopic examination is of great value in making the diagnosis, and it is further of value in determining whether or not the case is one for surgical treatment. The fluoroscopic technic consists of giving a small amount of bismuth in mothers' milk with the child in the horizontal position. While nursing from the bottle the mixture is watched as it passes through the esophagus into the stomach. The baby is rotated toward the right side, and as the bismuth gravitates toward the pyloric end of the stomach, peristaltic waves commence to be visible in the pyloric antrum and the pylorus. A small amount of bismuth is forced through, and as the pylorus closes tightly, peristaltic contractions can be seen which are independent of the rest of the stomach. The examination is repeated at the end of two hours and again at the end of four hours. If at the end of this time one-half of the bismuth remains in the stomach the case is considered a surgical one. The chief condition simulating this and which must be differentiated in diagnosis is pylorospasm. The most significant point in pylorospasm is that the vomiting and the peristalsis are much less marked, and it is usually observed in much older children. There is always absence of tumor in pylorospasm.

Intussusception in Infants.—EPSTEIN (*Ohio Med. Jour.*, June, 1920) reports 5 cases; 4 of these occurred in the summer, which fact together with the acute onset suggested gastro-intestinal inflammatory disease rather than intussusception. The alarming symptom for which medical